



3330 Cameron Park Drive, Ste 550  
Cameron Park, California 95682  
(530) 676-6004 ~ Fax: (530) 676-6005

April 4, 2006  
Project No. 2029-2400-01

Ms Loni Adams  
Sacramento Metropolitan  
Air Quality Management District  
777 12th Street, 3<sup>rd</sup> Floor  
Sacramento, California 95814

Re: Notification of Proposed SVE Test  
Kwik Serv  
2400 Fruitridge Road  
Sacramento, California

Dear Ms. Adams:

Stratus Environmental, Inc. (Stratus), on behalf of Mr. Bal Soin, has prepared this letter to notify Sacramento Metropolitan Air Quality Management District (SMAQMD) regarding a proposed one-day soil vapor extraction (SVE) test at the Kwik Serv facility (the site), located at 2400 Fruitridge Road, Sacramento, California (see Figure 1). The test is currently scheduled to be completed on April 5, 2006.

Stratus prepared and submitted a work plan (dated May 3, 2005) to the Sacramento County Environmental Management Department (SCEMD) proposing to conduct an SVE test to evaluate the technical feasibility of using SVE as a remedial alternative to mitigate the petroleum hydrocarbon impact to soil. The work plan was subsequently approved by SCEMD in a letter dated May 5, 2005. The objective of the test is to evaluate the concentrations of petroleum hydrocarbons in the soil vapors extracted from the subsurface, and to determine the radius of influence (ROI) of the extraction wells.

Stratus proposes to use a trailer mounted, CBA Equipment, LLC (CBA) 250 cubic feet per minute (cfm) thermal oxidizer. Petroleum hydrocarbon laden soil vapors will be extracted from existing vapor extraction wells VW-1, VW-2, and MW-4, for approximately 3 hours each using the 10-horsepower (hp) blower of the SVE system. The extracted soil vapors will be abated, using the thermal oxidizer, before being discharged to the atmosphere. A process flow diagram is presented in Figure 3. A 15-hp rated propane generator, or similar, will be used to energize the SVE system.

The CBA thermal oxidizer is rated at 99% destruction efficiency for benzene, and at 95 to 98% destruction efficiency for total petroleum hydrocarbons as gasoline (TPHG). Manufacturer's literature for the unit is presented in Appendix A. Stratus conducted a web research ([www.yahoo.com](http://www.yahoo.com)) to identify any schools within a 1,000-foot radius of the site and none were identified within the search area.

The following parameters will be monitored during the test:

- Vapor extraction rate using an averaging pitot tube,
- Applied vacuum at the vapor extraction well using standard pressure gauges, and
- Photo-ionization detector (PID) measurements for organic vapors from the extraction well, influent and effluent.

One set of influent and effluent air samples will be collected from the thermal oxidizer immediately after system start-up to verify system destruction efficiency. These samples will be forwarded to a state certified analytical laboratory for chemical analysis on a 24-hour turnaround time. The soil vapor samples will be analyzed for TPHG using United States Environmental Protection Agency (USEPA) Method 8015B/DHS LUFT Manual, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) using USEPA Method 8260B.

The analytical results of this set of air samples will be forwarded to SMAQMD via facsimile. Additional air samples will be collected during the test to evaluate system performance and to monitor petroleum hydrocarbon concentrations in soil vapors.

Upon completion of the test, and receipt of all analytical results, Stratus will prepare and submit a report that documents the extraction and emission rates of the system, along with its destruction efficiencies.

Ms. Loni Adams, SMAQMD  
Notification of Proposed SVE Test  
Kwik Serv, Sacramento, California  
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If you have any questions regarding this SVE test notification, please call Gowri Kowtha at (530) 676-6001.

Sincerely,

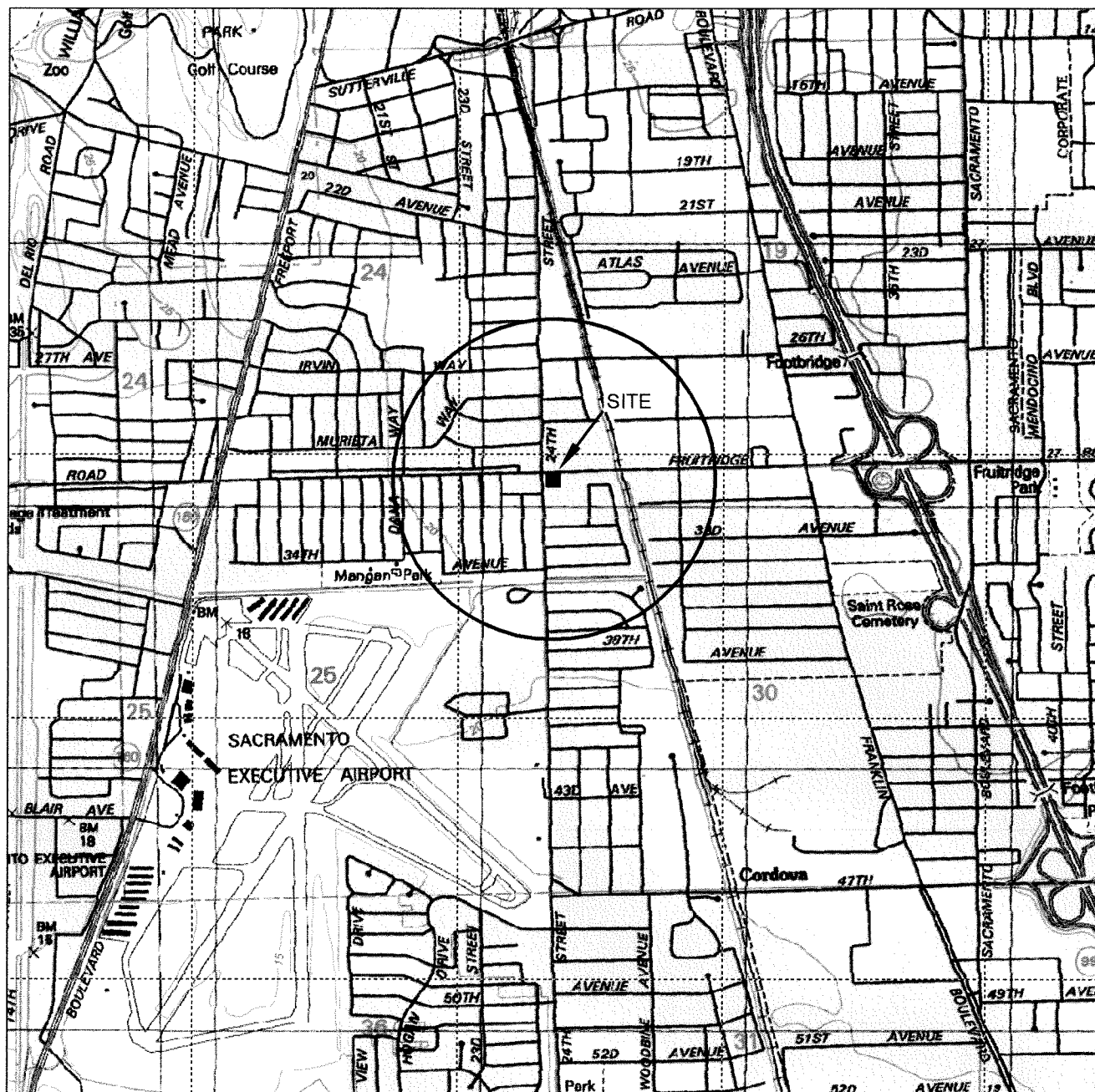
*STRATUS ENVIRONMENTAL, INC.*

A handwritten signature in black ink, appearing to read 'Gowri S. Kowtha', written over a horizontal line.

Gowri S. Kowtha, P.E.  
Project Manager

Attachments	Figure 1	Site Location Map
	Figure 2	Site Plan
	Figure 3	Process Flow Diagram
	Appendix A	Manufacturer's Literature

cc: Mr. Bal Soin, Kwik Serv Fueling Station  
Ms. Christyl Escarda, Central Valley Regional Water Quality Control Board  
Mr. Barry Marcus, Sacramento County Environmental Management Department



GENERAL NOTES:  
 BASE MAP FROM U.S.G.S.  
 SACRAMENTO, CA.  
 7.5 MINUTE TOPOGRAPHIC  
 PHOTOREVISED 1980



QUADRANGLE LOCATION



SCALE 1:24,000

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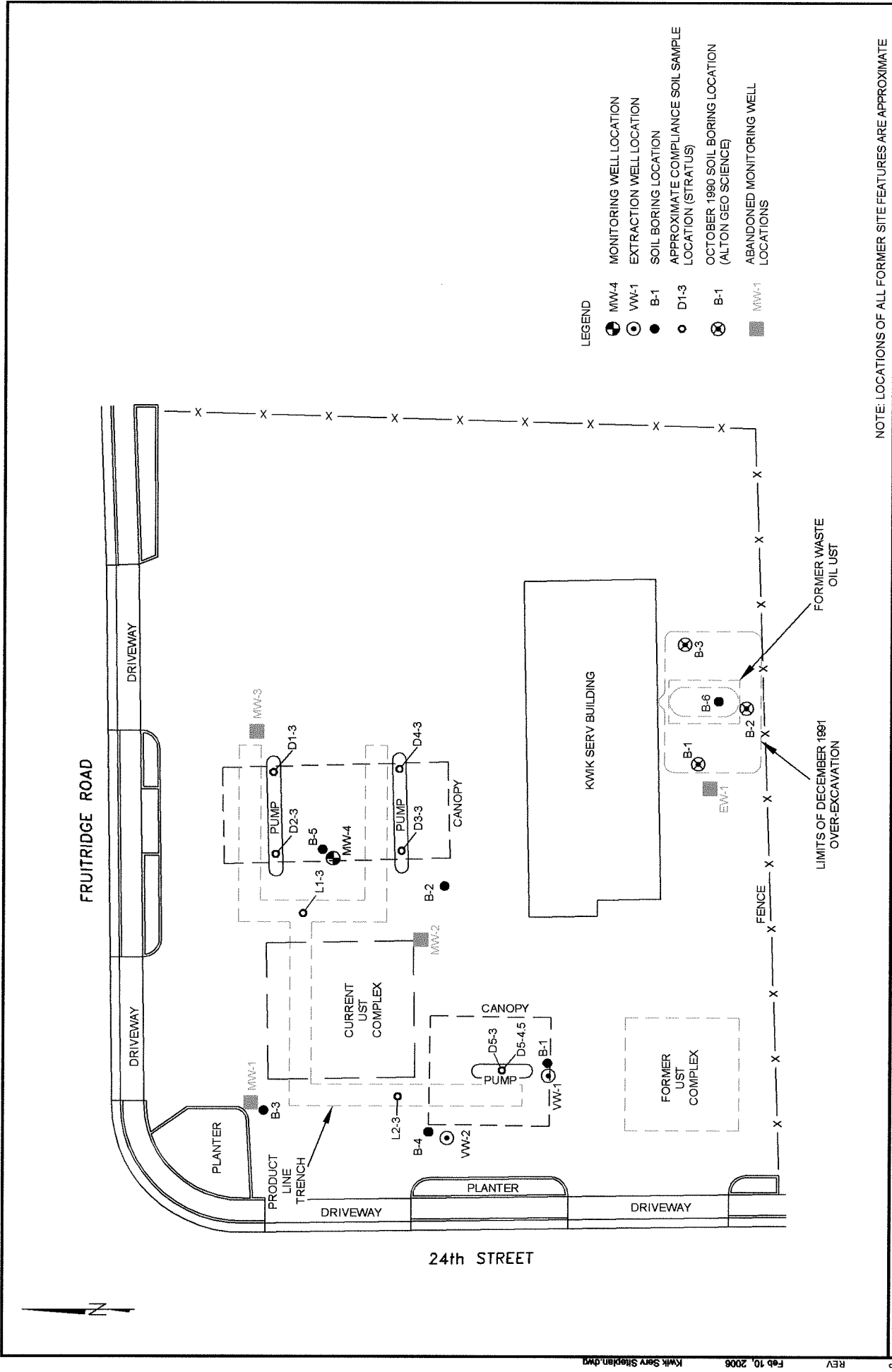
KWIK SERV  
 2400 FRUITRIDGE ROAD  
 SACRAMENTO, CALIFORNIA

**SITE LOCATION MAP**

FIGURE

**1**

PROJECT NO.  
 2029-2400-01



**STRATUS**  
ENVIRONMENTAL, INC.

**KWIK SERV**  
2400 FRUITRIDGE ROAD  
SACRAMENTO, CALIFORNIA

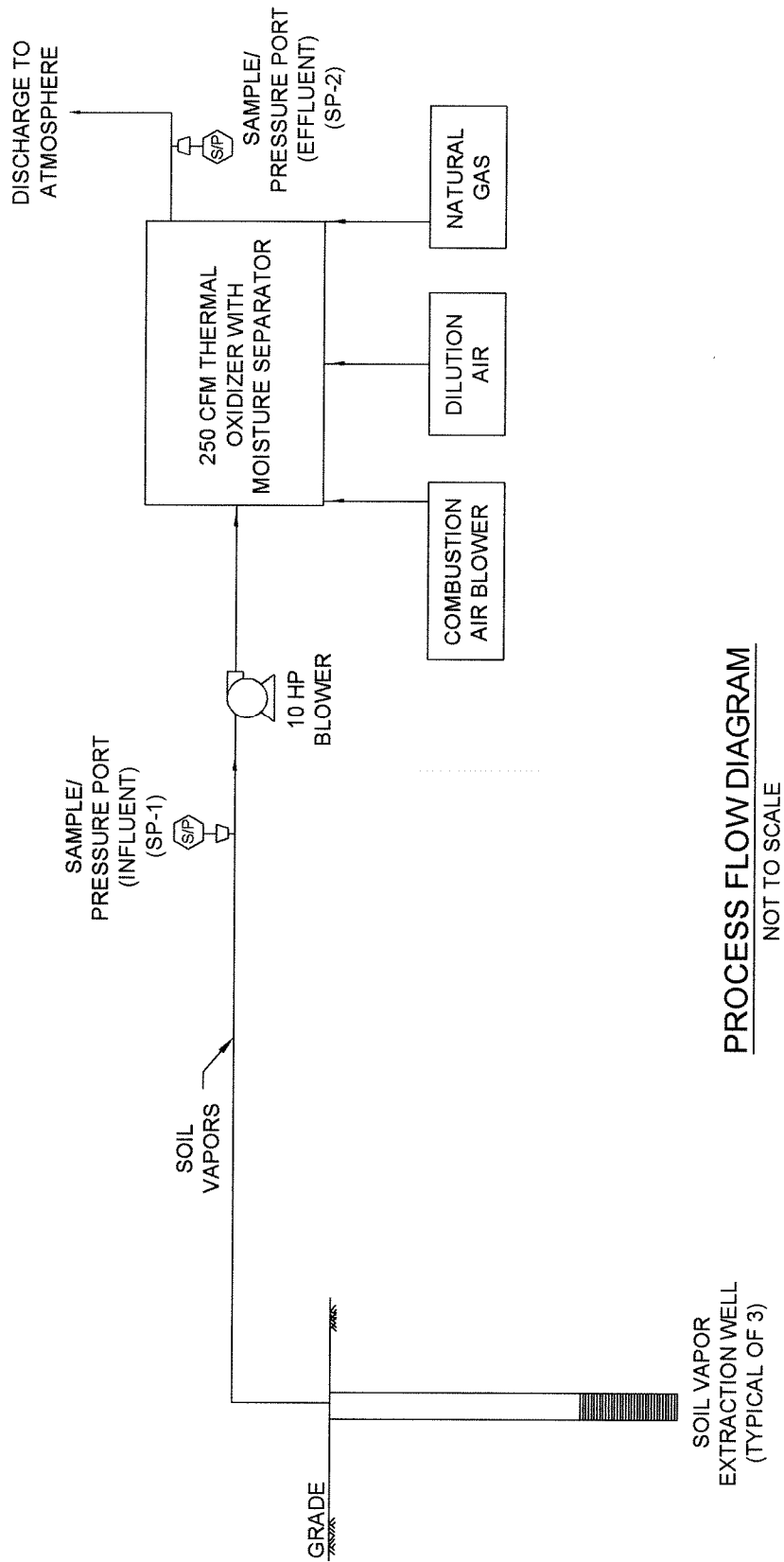
**FIGURE**  
2

**PROJECT NO.**  
2029-2400-01

**SITE PLAN**

**SCALE**

0 30 FT



**STRATUS**  
ENVIRONMENTAL, INC.

KWIK SERV  
2400 FRUITRIDGE ROAD  
SACRAMENTO, CALIFORNIA  
PROCESS FLOW DIAGRAM

FIGURE  
**3**

PROJECT NO.  
2029-2400-01

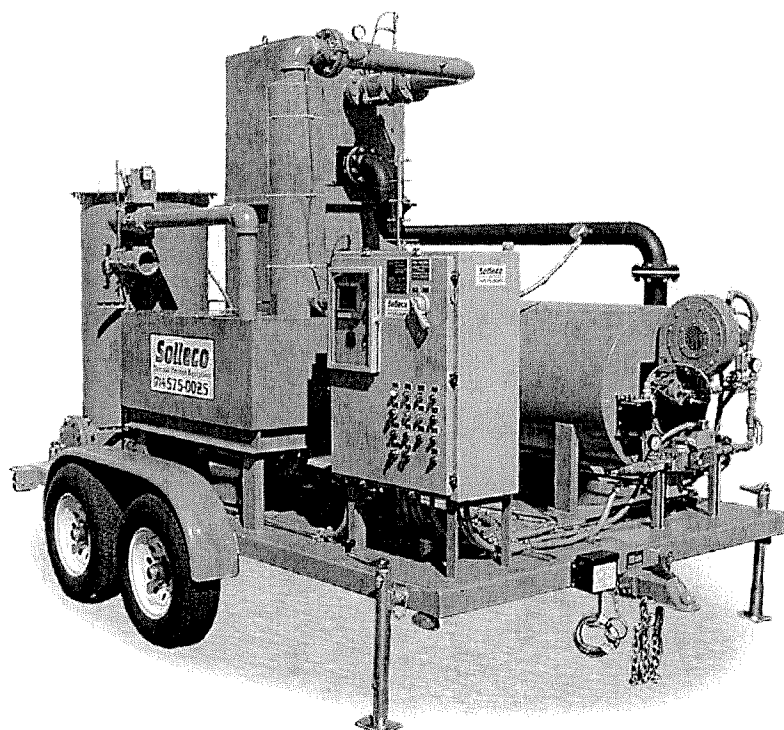
## **APPENDIX A**

### **MANUFACTURER'S LITERATURE**

# **Solleco** 250 THERMAL CATALYTIC OXIDIZER

## **Standard Features**

- Skid mounted system (84" x 120")
- 125 gallon entrained liquid separator
- Positive displacement blower
- 250 CFM and up to 14" Hg.
- Blower re-circulation valve
- 10 HP TEFC motor – 3 Phase
- A-36 steel oxidizer body with ceramic lining
- Excess air burner package
- NEMA 4 – NFPA Fuel train
- NEMA 4 electrical enclosure
- Digital temperature controller
- Digital dilution controller
- Digital high limit controller
- 2 Pen chart recorder
- DP Transmitter with pitot tube
- Analog hour meter



## **Standard Options**

1. Double axle trailer with jack stands
2. Stainless steel auto drain pump
3. Soundproof enclosure with fan
4. Four Point chart recorder
5. Six Point chart recorder
6. Auto dialer telemetry system
7. Wireless telemetry capability
8. 50% efficient heat exchanger
9. Platinum coated monolithic catalyst cell
10. System CSA certification
11. SCAQMD certified permit
12. 208/230 Volt – 1 Phase – 100 Amp

## **Utility Requirements**

- 208/230 Volt – 3 Phase – 100 Amps
- 500 scfh - 5 psi – LPG or Natural Gas

**SOLLECO INC.**  
1270 NORTH RED GUM  
ANAHEIM, CA 92806  
(714) 575-0025 • FAX (714) 575-0026 • [www.solleco.com](http://www.solleco.com)



## **250 TCAT THERMAL / CATALYTIC OXIDIZER TECHNICAL SPECIFICATIONS**

### **Oxidizer Specifications:**

<b>Chamber Length</b>	10 feet
<b>Chamber Retention Time</b>	1 second
<b>Stack Exit Velocity</b>	10 feet / second
<b>Throat Velocity</b>	40 feet / second
<b>Stack Discharge Height</b>	13 feet
<b>Skid Dimensions</b>	7 feet wide / 10 feet long
<b>Trailer Dimensions</b>	9 feet wide / 12 feet long
<b>Chamber Dimensions</b>	30" round outside - 20" round inside
<b>Chamber Internal Lining</b>	Ceramic Fiber
<b>Chamber Mixing Throat Diameter</b>	10" Round
<b>Burner Size</b>	500,000 btu/hr. (Maximum)
<b>Destruction Efficiency</b>	98% +
<b>Maximum VOC Influent (Thermal)</b>	12,000 ppmv (BTEX / MTBE)
<b>Operating Temperature (Thermal)</b>	1400° F to 1650° F
<b>Maximum VOC Influent (Catalytic)</b>	3,500 ppmv (BTEX - MTBE)
<b>Operating Temperature (Catalytic)</b>	600° F to 1200° F
<b>Normal VOC Effluent</b>	< 50 ppmv

### **Blower Specifications:**

<b>Blower Type</b>	Roots URAI 56
<b>Volumetric Flow</b>	250 CFM maximum
<b>Vacuum Level</b>	Up to 14" Mercury
<b>Motor Type</b>	10 HP TEFC
<b>RPM</b>	1500 (average)

### **Catalyst Specifications:**

<b>Catalyst Type</b>	Platinum Coated Metal Monolithic
<b>Catalyst Size</b>	19.5" O.D. x 3.5" Height
<b>Catalyst Volume</b>	.60 ft <sup>3</sup>
<b>Destruction Efficiency</b>	98% +
<b>Maximum VOC Influent</b>	3500 ppmv (BTEX / MTBE)
<b>Normal VOC Effluent</b>	<50 ppmv

### **Utility Specifications:**

<b>Supplemental Fuel</b>	Natural Gas or Propane
<b>Fuel Pressure</b>	2 to 5 psi (Maximum)
<b>Fuel Volume</b>	500 scfh (Maximum)
<b>Electrical Requirements</b>	208/230 Volt – 3 Phase - 100 Amps 208/230 Volt – 1 Phase – 100 Amps (Option)